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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/724,436	11/28/2000	Eshel Ben-Jacob	A33795	6759
21003	7590	12/23/2005	EXAMINER	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			MARSCHEL, ARDIN H	
		ART UNIT	PAPER NUMBER	1631

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

**Application No.**

09/724,436

**Applicant(s)**

BEN-JACOB ET AL.

**Examiner**

Ardin Marschel

**Art Unit**

1631

**—The MAILING DATE of this communication appears on the cover sheet with the correspondence address —**

THE REPLY FILED 12 October 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1.  The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
  - a)  The period for reply expires 3 months from the mailing date of the final rejection.
  - b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2.  The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3.  The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
  - (a)  They raise new issues that would require further consideration and/or search (see NOTE below);
  - (b)  They raise the issue of new matter (see NOTE below);
  - (c)  They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d)  They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4.  The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5.  Applicant's reply has overcome the following rejection(s): 112, 1st (New Matter) and 112, 2nd para. rejections.
6.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7.  For purposes of appeal, the proposed amendment(s): a)  will not be entered, or b)  will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: 14, 15, 34 and 35.

Claim(s) rejected: 13, 16, 17, 30-33, & 36.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8.  The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9.  The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10.  The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11.  The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See attachment for further explanation.
12.  Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_
13.  Other: Exr. Int. Summary copy from 10/19/05.

## DETAILED ACTION

### Further explanation of item # 11 on the enclosed Advisory action:

The after final amendment, filed 10/27/05, cannot be entered because it was filed after 3 months from the mailing of the Final action, mailed 7/13/05, without any time extension. This response is based on the amendment and arguments, filed 10/12/05, which is within the 3 months shortened statutory time period after the Final action, mailed 7/13/05.

The rejection of claims 13, 16, 17, 30-33, and 36 based on 102(e)(2) over Braun et al. (WO 99/04440) is maintained and reiterated from the previous office action, mailed 7/13/05. Applicants argue that DNA material is the active core as instantly claimed. In response, the entry of the amendment, filed 10/12/05, removed any "active core" limitation from claim 13 etc. thus making this argument clearly not corresponding to the factual basis in the claims and therefore moot. Applicants then argue that element "600" in Braun et al. is its active core and is made up of a copper particle and not an active DNA core. In response, as noted no active DNA core is required in the instant claims. Also, applicants admitted that oligonucleotides as DNA molecules are connected to said active copper particle core of Braun et al. which serve to form metal wires which are conductive segments for conducting electrical current that is modulated in the transistor functioning therein. Thus, any of these DNA containing metal wires which connect to the element "600" transistor core of Braun et al. performs as set forth in instant claim 13, for example, via the phrase "wherein said third segment is configured to electrically modulate current flowing across said fourth DNA segment through said P-bridges between said first and second of said three conductive segments in response to a gate voltage applied to said third conductive segment".

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Since the oligonucleotide fibers in said DNA segments are disclosed as formed via hybridization in Braun et al., they are double-stranded which is well known to be a conductive form of DNA. Thus, any current flow between the central particle in Braun et al. and the connected segments will at least partially flow through the conductive DNA fibers. This current is modulated via the third segment as a transistor in Braun et al. and this, modulated current, limitation of the instant claims is also met in Braun et al. In summary, the instant claims are not worded regarding the active core so as to distinguish them over Braun et al. which is still deemed a proper rejection basis.

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., Supervisory Patent Examiner, whose telephone number is (571) 272-0718. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (571) 272-0549.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 19, 2005

*Ardin H. Marschel 12/19/05*  
ARDIN H. MARSCHEL  
SUPERVISORY PATENT EXAMINER